

1

2. An adaptor that enables re-orientation of a peripheral adaptor comprising:
3
a Universal Serial Bus (USB) series "A" plug with four contacts;
4
a peripheral interface enabled to allow the attachment of the peripheral in
5
different orientations, the peripheral interface being fixably coupled and
6
electrically connected to the USB plug such that the four contacts are electrically
7
extended to the peripheral interface for access by the peripheral.

8

2. The adaptor as recited in claim 1, wherein the different orientations are
9
one of four possible orientations and wherein the peripheral interface further comprises a
10
four by four matrix of contacts arranged so that the peripheral may use the same four
11
contact connector configuration in all four of the possible orientations, thereby enabling
12
the same peripheral connector to be used regardless of the desired orientation.

13

14

3. The adaptor as recited in claim 1, wherein the peripheral interface further
15
comprises a circular contact joint arranged so that the peripheral may use the extended
16
four contacts in all possible orientations, thereby enabling the peripheral connector to
17
remain electrically engaged with the extended contacts regardless of the actual
18
orientation.

19

20

21

22

23

24

1
2 4. The adaptor as recited in claim 1, wherein the peripheral interface has an
3 extraction force in excess of the extraction force associated with the USB plug so that the
4 adaptor stays attached to the peripheral when the USB plug is extracted from a USB
5 series "A" receptacle.

6
7 5. The adaptor as recited in claim 4, wherein the peripheral interface has an
8 extraction force greater than 10 Newtons at an extraction rate of 12.5 mm per minute.

9
10 6. The adaptor as recited in claim 4, wherein the peripheral interface has an
11 extraction force greater than 40 Newtons steady state axial load for one minute.

12 7. The adaptor as recited in claim 1, wherein the peripheral is configurable as
13 a wireless device enabling short-range wireless communication, the peripheral further
14 comprising an antenna oriented in an upward direction.

1
2. The adaptor as recited in claim 1, the peripheral further comprises:
3
4. a wireless transceiver module electrically connected to the peripheral
interface that transceives signals to the USB plug; and
5
6. a wireless antenna electrically connected to the wireless transceiver
module for transceiving signals generated by the wireless transceiver module.

7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24

1
2 9. An adaptor system for rotationally re-orienting a peripheral device fixably
3 connected to a digital device, the adaptor system comprising:

4 a Universal Serial Bus (USB) series "A" plug with four signal wires;

5 a custom adaptor interface for electrically extending the signal wires from
6 the plug to the peripheral device;

7 *A/* a peripheral with desired orientation specific parameters; and

8 a custom peripheral interface for electrically coupling with the adaptor
9 interface such that the extraction force exceeds the extraction force of a USB
10 series "A" plug and receptacle.

11 10. The adaptor system as recited in claim 9, wherein the custom adaptor
12 interface and the custom peripheral interface have a rotatable fixable coupling via
13 continuous circular slide connectors, wherein the coupling allows for continuous
14 reorienting of the peripheral.

1
2 11. A coupling system for orienting an attached peripheral device, the system
3 comprising:

4 a digital device having an interface with a specified orientation;

5 a peripheral device having an operable orientation;

6 a connector for electrically and mechanically coupling to the interface to

7 receive communication signals for the peripheral device; and

8 an orienting coupling interface rigidly attached to the connector, the
9 orienting coupling interface having at least one contact for each signal received by
10 the connector and operably orienting to connect with the attached peripheral
11 device in the desired orientation.

12 12. The coupling system as recited in claim 11, wherein the selectively
13 attachable peripheral device is configurable as a bluetooth compatible module enabling
14 short-range wireless communication, the peripheral device further comprising:

15 a wireless transceiver module electrically connected to the orienting
16 interface; and

17 a wireless antenna electrically connected to the wireless transceiver
18 module for transceiving the signals generated by the wireless transceiver module.

19 20 13. The coupling system as recited in claim 11, wherein the orienting coupling
21 interface replicates each signal of the interface for each orientation, such that the
22 orienting coupling interface provides a replicated signal to the peripheral through all
23 ranges of orientation.

14. The coupling system as recited in claim 11, wherein the orienting coupling interface is a circular contact joint that facilitate re-orientation of the peripheral device and the connector.

1
2 15. An adaptor for electrically coupling a peripheral device with a computer,
3 said peripheral device having a peripheral interface with an operable orientation and said
4 computer having a computer interface in a fixed orientation, said adaptor comprising:
5 a. a computer interface plug for electrically and mechanically
6 coupling with said computer interface in said fixed orientation;
7 b. a peripheral interface plug for electrically and mechanically
8 coupling with said peripheral interface in said operable orientation; and
9 c. a contact coupling electrically and mechanically coupled between
10 said computer interface plug and said peripheral interface plug, said contact
11 coupling rotating one of said computer interface plug and said peripheral interface
12 plug to mechanically and electrically retain said computer interface in said fixed
13 orientation and facilitate said peripheral device in said operable orientation.
14
15
16
17
18
19
20
21
22
23
24